

## **The One Health Concept: How Multidisciplinary Training and Collaboration Leads to Major Advances in Health Care.**

The One Health, One Medicine philosophy of multidisciplinary collaboration has the extraordinary potential to expand scientific knowledge and innovation in health care. This collaboration can improve the longevity and quality of life for millions of patients. There is marked synergy between animal and human health. The way scientific collaboration between the Veterinary and the Medical community can improve patient care is well illustrated by the development of the First Balloon Expandable Coronary Stent. \*

The writer was fortunate to have completed a 5-year Veterinary Medical Degree followed 1-year later by a 5-year Medical Degree at the University of Queensland, Australia. Following clinical training that culminated in specialist qualifications in Cardiovascular Diseases, he completed his education with a PhD in Cardiac Hemodynamics at Sydney University, Australia.

A National Heart Foundation Fellowship took him to Emory University in Atlanta Georgia USA to work with Professor Andreas Gruentzig – the pioneer of Coronary Balloon Angioplasty. Coronary angioplasty was plagued by the shortcoming abrupt vessel collapse and closure complicating this potentially valuable procedure.

The writer's multidisciplinary skills facilitated successful research in multiple animal species and disease models. He collaborated closely with fellow veterinarians at Emory University and the University of Alabama at Birmingham. This work culminated in the development of the first balloon expandable coronary stent and first FDA approved coronary stent in 1994. The innovative, early clinical work and the scientific foundation of the preclinical animal studies was the underpinning for a medical procedure that has been used in hundreds of millions of patients since its introduction. Coronary stenting revolutionized coronary intervention - saving lives in patients with unstable coronary syndromes and improving quality of life in countless others.

Utilizing his multidisciplinary Veterinary and Medical skills the writer has gone on to develop devices for stenting of the carotid artery, embolic protection filters for the brain and devices for closing large bore access punctures in arteries.

There can be no doubt about the unique potential for the One Health Model for Multidisciplinary Training and Collaboration.



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*\*The First Balloon-Expandable Coronary Stent: An expedition that Changed Cardiovascular Medicine.:* **Roubin, Gary:** University of Queensland Press 2014.

